30457.1

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of: M.G. Erlander et al.	Group Art Unit:
	Examiner:
Serial No.: 08/152,482	Date Mailed: May 2, 1994
Filed: November 12, 1993	
For: METHOD FOR SIMULTANEOUS IDENTIFICATION OF DIFFERENTIALLY EXPRESSED mRNAs AND MEASUREMENT OF RELATIVE CONCENTRATIONS	Los Angeles, California

INFORMATION DISCLOSURE STATEMENT

Honorable Commissioner of
Patents and Trademarks
Washington, DC 20231

Dear Sir:

This document is an Information Disclosure Statement to the above-cited patent application, enclosed herein.

Attached hereto is at least one Form PTO-1449 listing documents believed relevant to the subject application. The submission of the following information is not intended, nor should it be construed, to constitute an admission that any patent, article, or other information referred to herein is "prior art" unless specifically designated as such. In accordance with 37 C.F.R. § 1.97(b) the filing of this information shall not be construed to mean that a search has been made or that no other material information may exist. Neither should its submission be construed to indicate that a thorough search should not be conducted by the Examiner.

It is believed that this disclosure complies with the requirements of 37 C.F.R. § 1.56, § 1.97, and § 1.98 and the Manual of Patent Examining Procedures § 707.05(b). If for some reason the Examiner considers otherwise, it is respectfully requested that the undersigned be telephoned so that any deficiencies can be remedied.

A copy of each document is enclosed. Some of the documents may have markings thereon. No significance is meant to be attached to the markings. These documents are not necessarily analogous art. Additionally, the order of the following documents is to be accorded no particular import as the order thereof is completely fortuitous.

It is respectfully requested that these documents be: (1) fully considered by the Patent and Trademark Office during the examination of this application; and (2) represented on any patent which may issue on the application. Applicants respectfully request that copies of the PTO-1449 forms, as considered and initialled by the Examiner, be returned with the next communication.

Exhibit 1 is a publication, J.H. Nadeau et al., "Multilocus Markers for Mouse Genome Analysis: PCR Amplification Based on Single Primers of Arbitrary Nucleotide Sequence," Mamm. Genome 3: 55-64 (1992).

Exhibit 2 is a publication, S.R. Woodward et al., "Random Sequence Oligonucleotide Primers Detect Polymorphic DNA Products Which Segregate in Inbred Strains of Mice," Mamm. Genome 3: 73-78 (1992).

Exhibit 3 is a publication, J.O. Bishop, "The Gene Numbers Game," Cell 2: 81-86 (1974).

Exhibit 4 is a publication, T. Ohta & M. Kimura, "Functional Organization of Genetic Material as a Product of Molecular Evolution," Nature 233: 118-119 (1971).

Exhibit 5 is a publication, N.D. Hastie & J.O. Bishop, "The Expression of Three Abundance Classes of Messenger RNA in Mouse Tissues," Cell 9: 761-774 (1976).

Exhibit 6 is a publication, J.A. Bantle & W.E. Hahn, "Complexity and Characterization of Polyadenylated RNA in the Mouse Brain," Cell 8: 139-150 (1976).

Exhibit 7 is a publication, D.M. Chikaraishi, "Complexity of Cytoplasmic Polyadenylated and Nonpolyadenylated Rat Brain Ribonucleic Acids," Biochemistry 18: 3249-3256 (1979).

Exhibit 8 is a publication, R.J. Milner & J.G. Sutcliffe, "Gene Expression in Rat Brain," Nucl. Acids Res. 11: 5497-5520 (1983).

Exhibit 9 is a publication, J.G. Sutcliffe, "mRNA in the Mammalian Central Nervous System," Ann. Rev. Neurosci. 11: 157-198 (1988).

Exhibit 10 is a publication, M.D. Adams et al., "Complementary DNA Sequencing: Expressed Sequence Tags and Human Genome Project," Science 252: 1651-1656 (1991).

Exhibit 11 is a publication, M.D. Adams et al., "Sequence Identification of 2,375 Human Brain Genes," Nature 355: 632-634 (1992).

Exhibit 12 is a publication, J.G.K. Williams et al., "DNA Polymorphisms Amplified by Arbitrary Primers Are Useful as Genetic Markers," Nucl. Acids Res. 18: 6531-6535 (1990).

• Exhibit 13 is a publication, J. Welsh & M. McClelland, "Fingerprinting Genomes Using PCR With Arbitrary Primers," Nucl. Acids Res. 18: 7213-7218 (1990).

• Exhibit 14 is a publication, J. Welsh et al., "Arbitrarily Primed PCR Fingerprinting of RNA," Nucl. Acids Res. 20: 4965-4970 (1992).

• Exhibit 15 is a publication, P. Liang & A.B. Pardee, "Differential Display of Eukaryotic Messenger RNA by Means of the Polymerase Chain Reaction," Science 257: 967-971 (1992).

• Exhibit 16 is a publication, M. Orita et al., "Detection of Polymorphisms of Human DNA by Gel Electrophoresis as Single-Strand Conformation Polymorphisms," Proc. Natl. Acad. Sci. USA 86: 2766-2770 (1989).

• Exhibit 17 is a publication, M. Orita et al., "Rapid and Sensitive Detection of Point Mutations and DNA Polymorphisms Using the Polymerase Chain Reaction," Genomics 5: 874-879 (1989).

• Exhibit 18 is a publication, S. Forss-Petter et al., "Neuron-Specific Enolase: Complete Structure of Rat mRNA, Multiple Transcriptional Start Sites, and Evidence Suggesting Post-Transcriptional Control," J. Neurosci. Res. 16: 141-156 (1986).

• Exhibit 19 is a publication, G.H. Travis & J.G. Sutcliffe, "Phenol Emulsion-Enhanced DNA-Driven Subtractive dCNA Cloning: Isolation of Low-Abundance Monkey Cortex-Specific mRNAs," Proc. Natl. Acad. Sci. USA 85: 1696-1700 (1988).

• Exhibit 20 is a publication, P. Liang et al., "Distribution and Cloning of Eukaryotic mRNAs by Means of

Differential Display: Refinements and Optimization," Nucl. Acids Res. 21: 3269-3725 (1993).

Respectfully submitted,

Date: May 2, 1994

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I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to: Commissioner of Patents and Trademarks, Washington, D.C. 20231 on MAY 2, 1994
(Date of Deposit)

Michael B. Farber
Michael B. Farber 5-2-94

Form 1449*

Atty. Docket No.	Serial No.
30457.1US01	08/152,482

Applicant
M.G. Erlander et al.

Filing Date	Group
November 12, 1993	

INFORMATION DISCLOSURE STATEMENT

BY APPLICANT
(Use several sheets if necessary)

U.S. PATENT DOCUMENTS

**Examiner Initial	Document Number	Date	Name	Class	Subclass	Filing Date (If Appropriate)

FOREIGN PATENT DOCUMENTS

**Examiner Initial	Document Number	Date	Country	Class	Subclass	Translation Yes	Translation No

OTHER DOCUMENTS

(Including Author, Title, Date, Pertinent Pages, Etc.)

**Examiner Initial	
	Nadeau, J.H., Bedigian, H.G., Bouchard, G., Denial, T., Kosowsky, M., Norberg, R., Pugh, S., Sargeant, E., Turner, R., and Paigen, B., (1992) Multilocus markers for mouse genome analysis: PCR amplification based on single primers of arbitrary nucleotide sequence. Mammalian Genome 3:55-64 (Exhibit 1)
	Woodward, S.R., Sudweeks, J., and Teuscher, C., (1992) Random sequence oligonucleotide primers detect polymorphic DNA products which segregate in inbred strains of mice. Mammalian Genome 3:73-78 (Exhibit 2)
	Bishop, J.O., (1974) The Gene Numbers Game. Cell 2:81-86 (Exhibit 3)
	Ohta, T. and Kimura, M., (1971) Functional Organization of Genetic Material as a Product of Molecular Evolution. Nature 233:118-119 (Exhibit 4)

	Hastie, N.D., and Bishop, J.O., (1976) The Expression of Three Abundance Classe of Messenger RNA in Mouse Tissues. Cell 9:761-774 (Exhibit 5)
	Bantle, J.A., and Hahn, W.E., (1976) Complexity and Characterization of Polyadenylated RNA in the Mouse Brain. Cell 8:139-150 (Exhibit 6)
	Chikaraishi, D.M., (1979) Complexity of Cytoplasmic Polyadenylated and Nonpolyadenylated Rat Brain Ribonucleic Acids. Biochemistry 18(15):3249-3256 (Exhibit 7)
	Milner, R.J., and Sutcliffe, J.G., (1983) Gene expression in rat brain. Nucleic Acids Research 11(16):5497-5520 (Exhibit 8)
	Sutcliffe, J.G., (1988) mRNA in the Mammalian Central Nervous System. Ann. Rev Neurosci. 11:157-98 (Exhibit 9)
	Adams, M.D., Kelley, J.M., Gocayne, J.D., Dubnick, M., Polymeropoulos, M.H., Xiao, H., Merril, C.R., Wu, A., Olde, B., Moreno, R.F., Kerlavage, A.R., McCombie, W.R., and Venter, J.C., (1991) Complementary DNA Sequencing: Expresse Sequence Tags and Human Genome Project. Science 252:1651-1656 (Exhibit 10)
	Adams, M.D., Dubnick, M., Kerlavage, A.R., Moreno, R., Kelley, J.M., Utterback, T.R., Nagle, J.W., Fields, C., and Venter, J.C., (1992) Sequence identification of 2,375 human brain genes. Nature 355:632-634 (Exhibit 11)
	Williams, J.G.K., Kubelik, A.R., Livak, K.J., Rafalski, J.A., and Tingey, S.V., (1990) DNA polymorphisms amplified by arbitrary primers are useful as genetic markers. Nucleic Acids Research 18(22):6531-6535 (Exhibit 12)
	Welsh, J., and McClelland, M., (1990) Fingerprinting genomes using PCR with arbitrary primers. Nucleic Acids Research 18(24):7213-7218 (Exhibit 13)
	Welsh, J., Chada, K., Dalal, S.S., Cheng, R., Ralph, D., and McClelland, M., (1992) Arbitrarily primed PCR fingerprinting of RNA. Nucleic Acids Research 20(19): 4965-4970 (Exhibit 14)
	Liang, P., and Pardee, A.B., (1992) Differential Display of Eukaryotic Messenge RNA by Means of the Polymerase Chain Reaction. Science 257:967-971 (Exhibit 15
	Orita, M., Iwahana, H., Kanazawa, H., Hayashi, K., and Sekiya, T., (1989) Detection of polymorphisms of human DNA by gel electrophoresis as single-strand conformation polymorphisms. Proc. Natl. Acad. Sci. USA 86:2766-2770 (Exhibit 16
	Orita, M., Suzuki, Y., Sekiya, T., and Hayashi, K., (1989) Rapid and Sensitive Detection of Point Mutations and DNA Polymorphisms Using the Polymerase Chain Reaction. Genomics 5:874-879 (Exhibit 17)
	Forss-Petter, S., Danielson, P., and Sutcliffe, J.G., (1986) Neuron-Specific Enolase: Complete Structure of Rat mRNA, Multiple Transcriptional Start Sites, and Evidence Suggesting Post-Transcriptional Control. Journal of Neuroscience Research 16:141-156 (Exhibit 18)

	Travis, G.H., and Sutcliffe, J.G., (1988) Phenol emulsion-enhanced DNA-driven subtractive cDNA cloning: Isolation of low-abundance monkey cortex-specific mRNAs. Proc. Natl. Acad. Sci. 85:1696-1700 (Exhibit 19)
	Liang, P., Averboukh, L., and Pardee, A.B., (1993) Distribution and cloning of eukaryotic mRNAs by means of differential display: refinements and optimization. Nucleic Acis Research 21(14): 3269-3275 (Exhibit 20)

Examiner	Date Considered

*Substitute Disclosure Statement Form (PTO-1449)

**EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

FORM PTO-1449 U.S. DEPARTMENT OF COMMERCE
PATENT AND TRADEMARK OFFICE

ATTY DOCKET NO.	SERIAL NO.
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APPLICANT
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INFORMATION DISCLOSURE
STATEMENT BY APPLICANT

FILING DATE	GROUP
September 25, 2001	Unassigned

U.S. PATENT DOCUMENTS

EXAM. INITIALS		DOCUMENT NUMBER	DATE	NAME	CLASS	SUB-CLASS	FILING DATE

FOREIGN PATENT DOCUMENTS

EXAM. INITIALS		DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUB-CLASS	TRANSLATION YES NO
		9318176	9/16/93	PCT			
		9222651	12/23/92	PCT			
		9101384	2/7/91	PCT			

OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages)

	1	Baur, et al., *Nucleic Acids Research*, 21(18), 4272-4280 (1993)
	2	Fahy, et al., *PCR Methods and Applications*, 1, 25-33 (1991)
	3	Ko, *Nucleic Acids Research*, 18(19), 5705-5711 (1990)
	4	Rubenstein, et al., *Nucleic Acids Research*, 18, 4833-4842 (1990)
	5	Stoflet, et al., *Science*, 239, 491-494 (1988)
	6	White, et al., *Trends in Genetics*, 5(6), 185-188 (1989
	7	Stratagene Product Catalogue (1993)

EXAMINER	DATE CONSIDERED

EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to Applicant.